

ABSTRACT

The present invention provides methods and compositions for delivery of synthetic pre-*trans*-splicing molecules (synthetic PTMs) into a target cell. The compositions of the invention include synthetic pre-*trans*-splicing molecules (PTMs) with enhanced stability against chemical and enzymatic degradation. The synthetic PTMs are designed to interact with a natural target precursor messenger RNA molecule (target pre-mRNA) and mediate a *trans*-splicing reaction resulting in the generation of a novel chimeric RNA molecule (chimeric RNA).